EMS Implementation Workshop

An Overview of Environmental Management Systems (EMS) and the ISO Standard

WHAT IS AN ENVIRONMENTAL MANAGEMENT SYSTEM? The ISO 14001 Definition

- "The overall management **system** that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for **developing, implementing, achieving, reviewing and maintaining the environmental policy**."

“ems” vs. “EMS”

- All organizations have some type of environmental management system regardless of what they do
- For this discussion, the focus is a more formalized, recognized, and structured approach defined in the international EMS standard, ISO 14001
- In most cases, additional effort is needed to transition from existing environmental activities to the more formal ISO 14001-type EMS

An Effective EMS is:

- Flexible
- Transparent
- Useful to the “practitioner”
- In harmony with mission focus
- Focused on continual improvement

EMS and ISO 14001

- 14001 is one of the standards in the 14000 series
- Created by International Organization for Standardization (Geneva, Switzerland)
- Each participating nation has a committee that develops consensus and contributes (one vote each, for US it is ANSI)

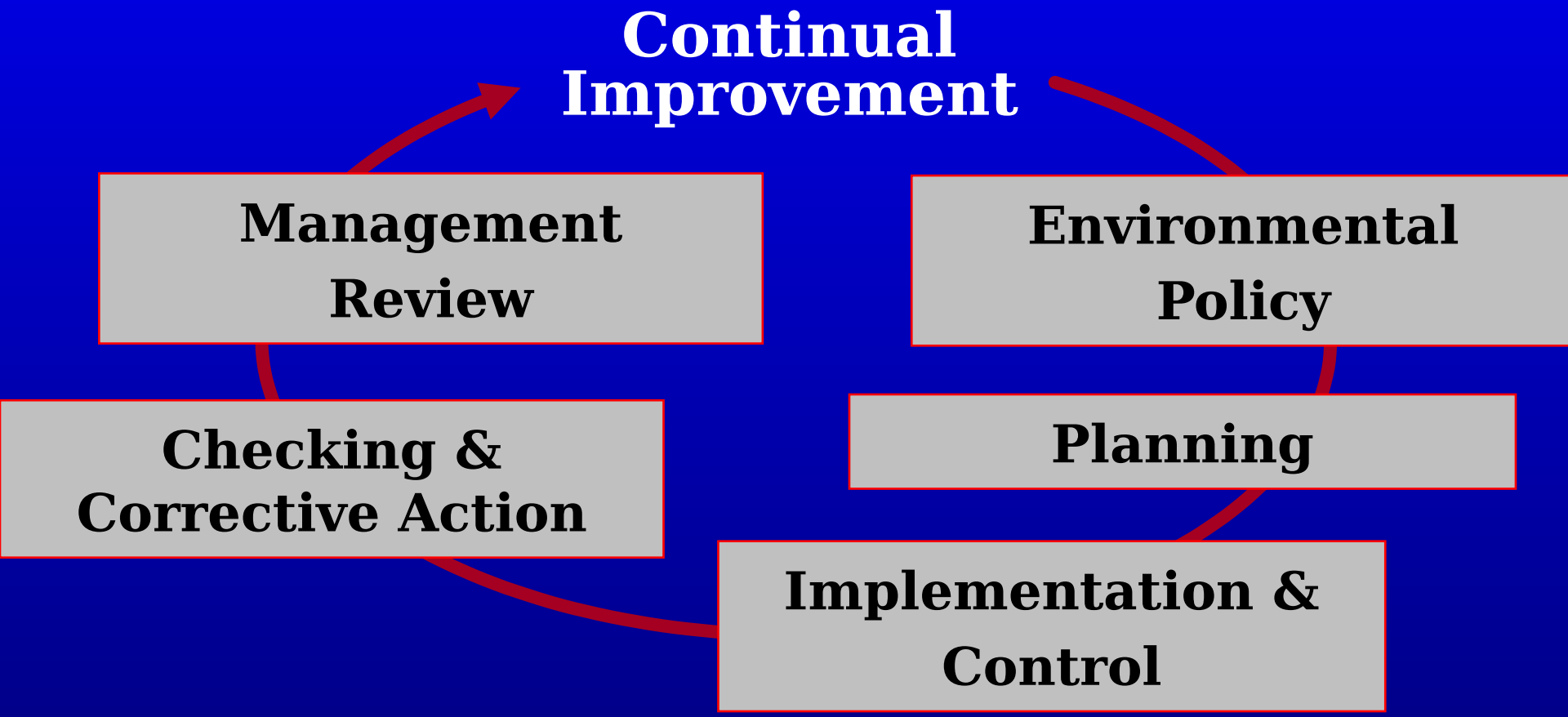
EMS and ISO 14001

- USTAG to TC207
- Finalized and issued in 1996, revised every five years
- Market sector created and driven; governments participate but it is not legislative or regulatory
- Process standard, not performance

Important EMS Terms

- “Shall”
- “Establish and Maintain”
- “Responsibility and Authority”

Plan Do Check Act



Policy

- Top management is responsible!
- Statement of an organization's intentions and principals in relation to its overall environmental performance
- Provides a framework for the EMS objectives and targets
- Is documented, communicated and implemented

Policy

- Reflects nature and scale of organization
- Includes commitment to continual improvement and pollution prevention
- Includes commitment to compliance with regulatory *and other* requirements
- Communicated internally and externally

Planning

Identify Activities, Products and Services
Identify Environmental Aspects and Impacts
Determine Significant Environmental Aspects
Determine Legal and Other Requirements
Establish Objectives and Targets
Develop Environmental Management Program

Environmental Aspects

- Establish and maintain a procedure to identify environmental aspects of activities products and services that you *"can control and over which you can be expected to have an influence"*
- To determine those which have or can have significant impacts on the environment
- Examples include air emissions, water discharges, soil contamination, use of raw materials, energy use, use of natural resources

Activities, Products and Services

- This is what you do at your facility – mostly “activities” for Feds
  - Mission – what ‘facility’ is designed to do - e.g. visitor center
  - Activities that support the mission – e.g. vehicle maintenance
  - Actions that are both regulated and not regulated e.g. commuting to work

Determining Significant Aspects

- Determined by YOU! What is important in your situation.
  - Considers likelihood, severity, frequency, duration, boundaries, stakeholder concerns
  - Reflects normal, unique, and emergency conditions
- Significance is based on <u>environmental impact</u>

Legal and Other Requirements

- Establish and maintain a procedure to identify legal requirements that apply to your facility's aspects – use audit guides or protocols
- Identify other requirements to which you "subscribe" e.g., Executive Orders, agency/bureau policies or voluntary practices

Objectives and Targets

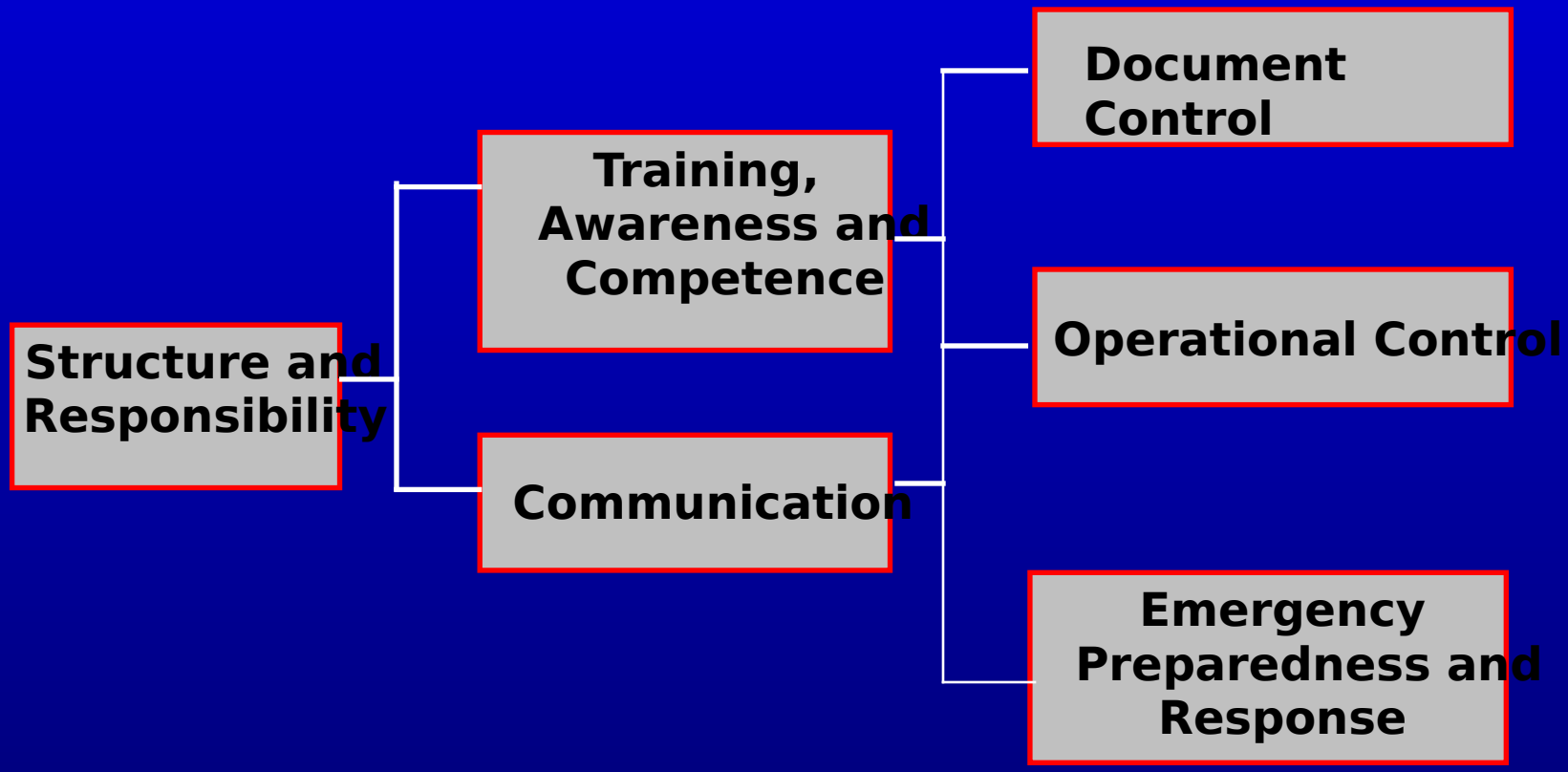
- Establish and maintain documented environmental objectives and targets
- Consider “legal and other requirements”
- Consider significant aspects
- Reflect financial and technical limitations
- Reflect “interested parties”
- Reflect policy commitment and commitment to pollution prevention
- Results guide how you will measure progress

Environmental Management Program

- Establish and maintain a program to achieve objective and targets
- Assign responsibility
  - Function
  - Level
- Describe what is to be done, what will be measured, and what the time frame will be

Implementation and Operation

Organization & Accountability | **Capabilities & Communications** | **Controls**



Structure and Responsibility

- Roles and responsibilities are defined, documented, communicated
- Management provides resources for implementation of the system
- Management identifies Management Representative that is responsible for and has authority for
  - Managing EMS implementation
  - Reporting to top management on EMS progress

Training Awareness and Competence

- Establish and maintain a procedure for training relevant to
  - EMS - awareness including policy
  - Relationship between employee activities and environmental impacts
- Ensure competence training to
  - Regulatory requirements
  - Standard operating procedures

Communication

- Establish and maintain a procedure
  - For internal communication – between levels and functions BOTH WAYS!
  - For addressing external communications

Document Control

- Establish and maintain procedures for controlling system documents
  - Can be located - are legible, dated and maintained
  - Reviewed and revised as necessary and approved
  - Current versions are available to practitioner
  - Obsolete documents are removed from use and maintained if necessary

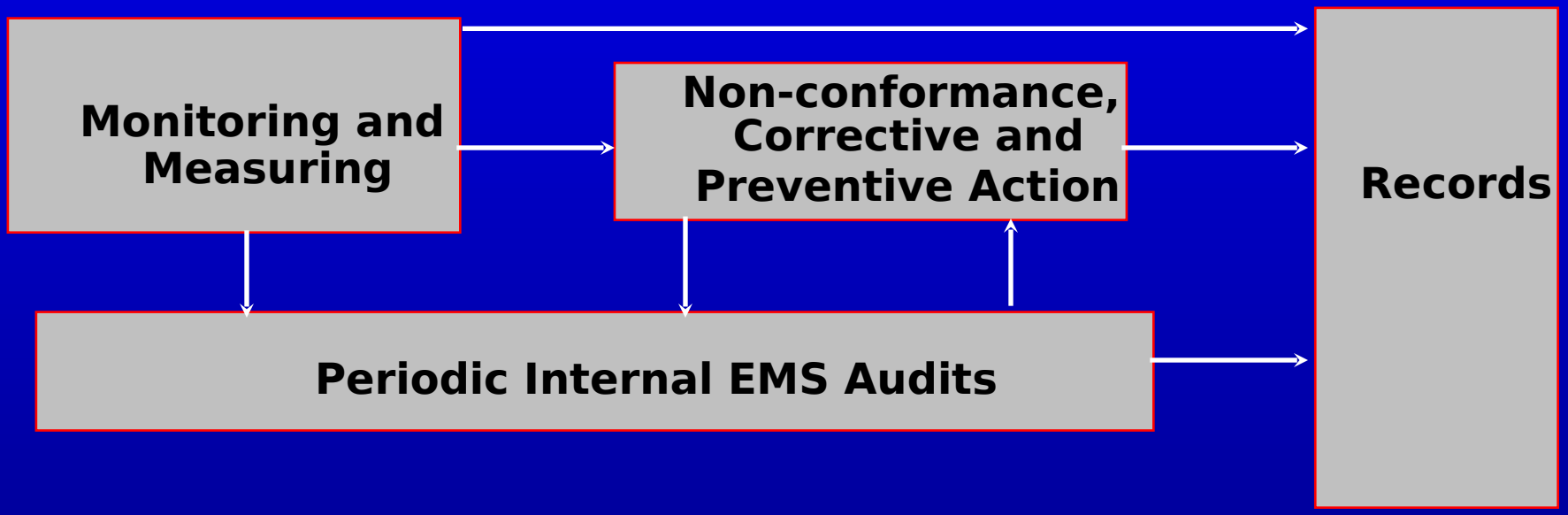
Operational Control

- Identify operations and activities associated with significant environmental aspects
- Establish and maintain procedures for addressing activities that affect significant aspects to avoid deviations from policy and objectives and targets
- Considering goods and services, communicate procedures to suppliers and contractors

Emergency Preparedness and Response

- Establish and maintain procedures to
  - Identify potential for emergencies
  - Address accidents and emergencies
  - Prevent, respond to and mitigate environmental impacts
  - Review and revise procedures after emergency or accident
  - Test where appropriate

Checking and Corrective Action



Monitoring and Measurement

- Establish and maintain documented procedures to monitor and measure activities related to significant aspects
  - Formally track performance, operational control
  - Reflect objectives and targets
  - Maintain and calibrate monitoring equipment

Monitoring and Measurement

- Established and maintain a documented procedure to periodically assess compliance with environmental regulations

Non Conformance, Corrective and Preventive Action

- Establish and maintain procedures defining responsibility and authority to address non-conformance
  - Mitigate impacts
  - Identify cause
  - Develop corrective action and implement it
  - Modify procedures if necessary to prevent recurrence

Records

- Establish and maintain procedures for identification, maintenance and disposition of environmental records
  - Training
  - Audits or other reviews
  - Legible and traceable to the activity, product or service involved
- Demonstrate conformance to Standard

Internal EMS Audits

- Establish and maintain a program and procedures to periodically audit to determine if the EMS,
  1) is being properly implemented and maintained, and
  2) conforms to the standard

- Audit information provided to management

Management Review

Take account of:

- audit findings
- progress records on objectives
- changes to facilities
- changes in activities, products or services
- changes in technology
- concerns of interested parties
- other relevant information

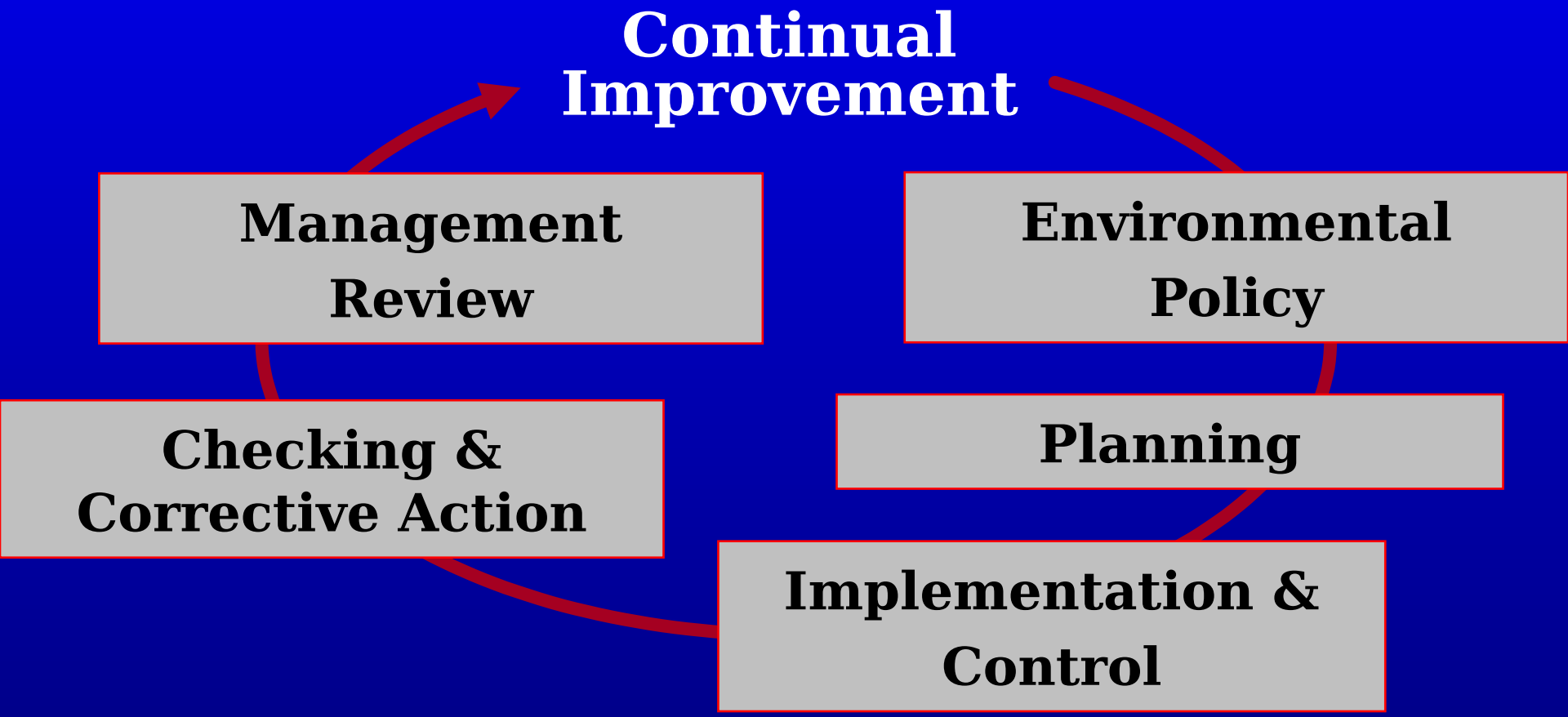
To Assess the

- suitability,
- adequacy, and
- effectiveness of the EMS

In order to determine the need for change and improvement to:

- the environmental policy
- the objectives and targets
- other elements of the EMS

Plan Do Check Act



Keep in mind…

- The EMS and related measurement tools are just that, tools. Alone, they will not guarantee success. The organization must **use** the tools, not just **have** them.
- An effective EMS is “alive”; constantly measuring performance, making adjustments, and looking for opportunities for continual improvement
- Accountability is critical

Summary

- A formal EMS reflects an accepted framework for managing the environmental footprint of your organization
- Most organizations already have several EMS elements in place - the system relationship is lacking and can be achieved by adopted a formal framework
- Success comes from following the framework and being committed to implementation